
A New Species of Nematopoid *Xyris* (Xyridaceae) from the Araracuara Area of Colombia

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ABSTRACT. A new species of *Xyris* (sect. *Nematopus*) has been discovered in the Caquetá basin east of Araracuara, Dept. Caquetá in the Colombian Amazon area. *Xyris trachysperma* is described, illustrated, and discussed as to its relationships with other taxa of the section. The affinities of *X. trachysperma* appear to be more with species of planaltan Brazil than with those of the Guayana Highlands.

During integrated surveys by personnel of the Tropenbos Program of the forest and soils of the Caquetá basin east of Araracuara, Dept. Caquetá, in the Colombian Amazon area, J. Duivenvoorden and associates visited and collected plants in the savanna complexes of a sandstone meseta (350 m a.s.l.) near Araracuara in 1988 and 1990. This region of Colombia has long been known to be rich in Xyridaceae: its lowland and upland savannas produce a wealth of species shared with the Orinoco and Río Negro systems of Colombia and contiguous Venezuela and also some unshared endemics. The Araracuara area has had a fairly long history of plant exploration, most of it originating with R. E. Schultes, H. García-Barriga, and associates in the 1950s, and subsequently by B. Maguire and associates in the 1950s and 1960s, resulting in the discovery of several novelties, three from Río Caquetá savannas. Yet these systems are so large and so complex that the potential for further discoveries continues. Therefore, when a large set of collections from this place was sent from Tropenbos to VDB for definitive study, one *Xyris* attracted particular attention. A full description of it is provided to emphasize that its affinities are, surprisingly, more with species of planaltan Brazil rather than with its Colombian or Venezuelan cohabitants.

Xyris trachysperma Kral & Duivenvoorden, sp. nov. TYPE: Colombia, Dept. Caquetá: Araracuara (0°37'S, 72°24'W), sobre la mesa de

areniscas de la base militar, 18 Oct. 1990, *Joost Duivenvoorden & A. Cleef 306* (holotype, Herbario Amazónico; isotype, VDB). Figure 1a–n.

Xyris trachysperma, species nova: a *X. bialata* Malme foliis et scapis ciliatis, bracteis fertilibus minute rufociliatis, a *X. melanovaginata* Kral caulibus brevioribus, scapis bialatis, areis dorsalibus distinctibus, et ab ambobus seminibus paucis (2–4), cupiformis, 1.3–1.4 mm longis, grosse papillatis bitruncatis, bi-umbilicatis, apicibus anguste apiculatis, placentatio basalis differt.

Sturdy caespitose perennial to 75 cm high, roots fibrous, somewhat coarse. Stems short, to 4 cm. Leaves flabellately spreading, the principal ones 40–60 cm long, longer than the scape sheaths; sheaths entire, ecarinate at base, carinate above it, lustrous brown or dark red-brown, the keel a deep shining red-brown, often rusty-ciliolate, the sides abruptly, then gradually narrowing to a short-ligulate apex; blades elliptic-linear, 3–4 times longer than the sheaths, 5–10.1 mm wide, flat, olivaceous, with several broad, low nerves, the surfaces finely papillose; tips abruptly incurved-acute, densely red-ciliate; margins with a narrow, deep, red-brown, incrassate, lustrous, entire to intermittently rusty-ciliolate border. Scapes gradually widening from base upward, broadly bi-alate, distally to 6 mm wide, green, slightly thickened and rusty-ciliolate at margin, the sheaths angulate, short-bladed. Spikes narrowly ellipsoid or cylindrical, 1.5–2.5 cm long, obtuse, many-flowered; sterile bracts 2 pairs, decussate, the lower pair triangular, strongly carinate, 3–5 mm long, the carinas ciliolate, the inner pair obovate, ca. 3–3.5 mm long; fertile bracts broadly ovate to broadly elliptic, 6–7 mm long, convex, ecarinate, at anthesis with a light brown matrix, reddish brown, with margin rusty fimbriolate and with the dorsal areas ovate or broadly elliptic, green, with costa indistinctly antrorsely arcuately branched. Flowers with lateral sepals free, curved, inequilateral, ca. 6 mm long, acute to acuminate; keel broad, rusty-

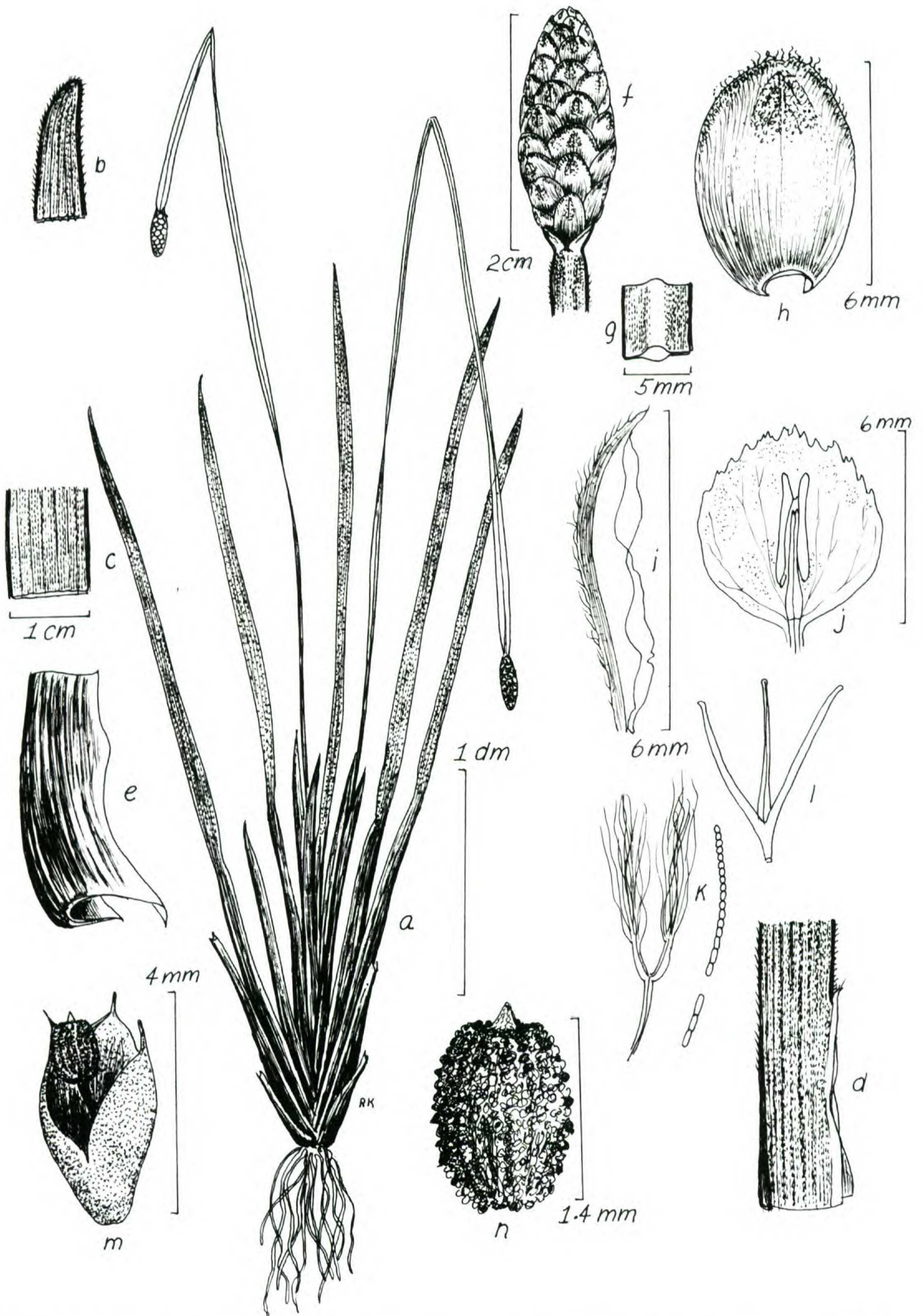


Figure 1. *Xyris trachysperma* Kral & Duivenvoorden. —a. Habit sketch. —b. Leaf apex. —c. Leaf blade, midsector. —d. Leaf blade-sheath junction. —e. Leaf base. —f. Spike. —g. Scape sector. —h. Fertile bract. —i. Lateral sepal. —j. Petal blade, stamen. —k. Staminode (left) and enlarged beard hair (right). —l. Stylar apex. —m. Dehiscent capsule showing one seed on elongate funiculus. —n. Seed.

ciliate. Petals with blades orbicular, light yellow, ca. 6 mm long, apically lacerate. Staminodia 2-branched, the branches densely long-penicillate. Anthers oblong, 2.5 mm long, deeply bifid, slightly sagittate; filaments terete, 1.5–2 mm long. Capsule obovoid, 3–4 mm long, acuminate; placentation basal with elongate-clavate funicles. Seeds few (2–4), barrel-shaped, 1.3–1.4 mm long, dark dull brown, coarsely papillate or tuberculate, obscurely coarsely ribbed, the ends truncate-umbilicate, the apex narrowly apiculate.

This species is one of the most distinctive of American *Xyris*, primarily because of its unique seed form and sculpture. An attempt to align it with some previous large treatments of South American *Xyris*, such as those by Idrobo (1954), Maguire & L. B. Smith (1964), L. B. Smith & R. J. Downs (1968), or myself (1988), would place it, as to general characters, nearest *X. melanovaginata* Kral & Lyman B. Smith of the high tepuis of Bolívar, Venezuela, or *X. bialata* Malme far to the southeast in the Brazilian planalto. Both of these are likewise sturdy, with similarly pigmented foliage, leaves in fans, with strongly broadened scapes, and with similar spikes, fertile bracts, and sepals. However, *X. melanovaginata*, while displaying similar leaves and remark-

ably similar spike outlines, has much longer stems; its broad scapes, while compressed, are not bi-alate; its spike bracts lack dorsal areas. Also, and perhaps most importantly, placentation in *X. melanovaginata* is distinctly axile. On the other hand, the Brazilian *X. bialata* comes nearest overall, even though it occurs far to the southeast. It combines a short stem, broadly bi-alate scapes, and fertile bracts with distinct dorsal areas; its placentation is of the central type. Such features thus, in a general treatment, align it most closely with *X. trachysperma*, which is nonetheless separated by its ciliate leaf blades and scapes, its narrower spikes, its ciliolate bract edges, its basal (rather than free-central) placentation, and particularly by its fewer, larger, and distinctive seeds.

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